

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P311903

Luminaire Tested: **14FCZ2-29-UNV-L83050-HRP-CP125-W2A-U-4500K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P311903
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-18)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-29-UNV-L83050-HRP-CP125-W2A-U-4500K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" POLYCARB SHEET
Light Source: (168) 4500K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2201.0 lumens
Efficiency: N/A
Efficacy: 88.0 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.29 / 1.39
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

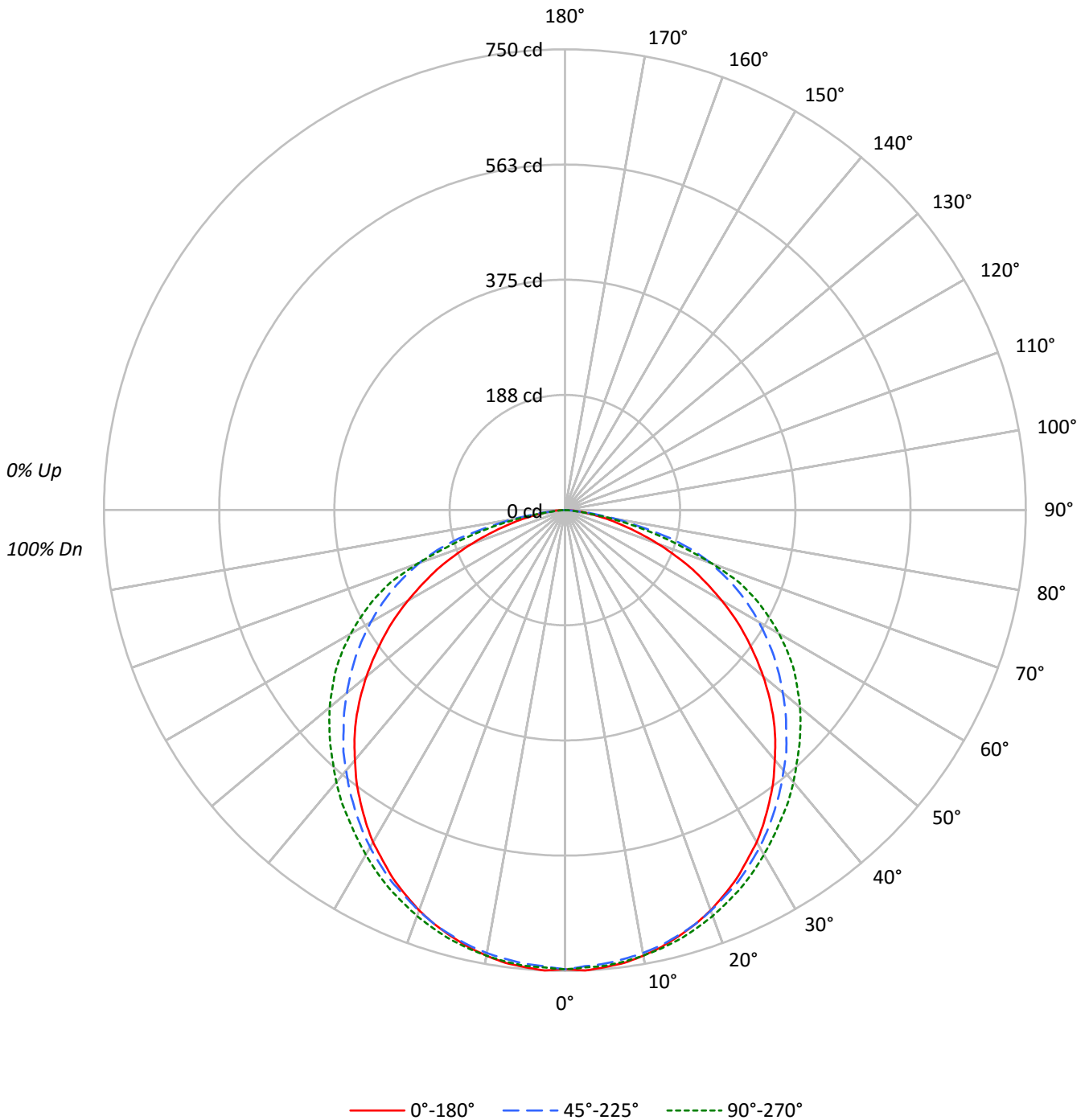
Input Watts (W): 25
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73	78	75	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	69	56	47	40	68	55	46	40	53	45	40	51	45	39	50	44	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2012	2012	2012
5°	2017	2002	2012
10°	2012	2001	2012
15°	1999	1996	2015
20°	1986	1988	2014
25°	1965	1981	2014
30°	1940	1970	2013
35°	1905	1955	2017
40°	1867	1945	2033
45°	1828	1939	2054
50°	1765	1938	2092
55°	1688	1948	2137
60°	1587	1963	2164
65°	1463	1983	2177
70°	1275	1987	2004
75°	1050	1850	1619
80°	826	1330	1083
85°	642	513	256



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.8	3.2
10°-20°	203.1	9.2
20°-30°	308.4	14.0
30°-40°	373.6	17.0
40°-50°	393.7	17.9
50°-60°	367.6	16.7
60°-70°	293.7	13.3
70°-80°	161.6	7.3
80°-90°	28.5	1.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	582.2	26.5
0°-40°	955.8	43.4
0°-60°	1717.1	78.0
0°-90°	2201.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2201.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	748	748	748	748	748	
5°	747	745	741	746	745	71
15°	718	718	716	723	723	203
25°	662	663	667	677	678	305
35°	580	586	595	610	614	363
45°	480	489	509	532	540	370
55°	360	378	415	444	455	321
65°	230	259	311	337	342	226
75°	101	145	178	160	156	109
85°	21	26	17	10	8	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	747.5	747.5	747.5	747.5	747.5
2.5°	750.2	748.2	743.3	747.5	745.4
5°	746.8	744.7	741.2	746.1	744.7
7.5°	743.3	740.5	737.1	742.6	741.2
10°	736.4	734.3	732.2	737.1	736.4
12.5°	728.1	727.4	725.3	730.9	730.2
15°	717.7	717.7	716.3	723.2	723.2
17.5°	706.6	705.9	706.6	714.2	713.6
20°	693.5	693.5	694.2	703.2	703.2
22.5°	677.6	678.3	680.3	691.4	690.7
25°	661.7	663.0	667.2	676.9	678.3
27.5°	642.3	645.7	650.6	662.3	663.7
30°	624.3	626.4	634.0	645.0	647.8
32.5°	602.8	607.0	615.3	627.7	631.2
35°	580.0	585.5	595.2	610.4	613.9
37.5°	557.1	562.0	575.1	591.1	597.3
40°	531.5	539.8	553.7	571.7	578.6
42.5°	506.6	514.9	533.6	552.3	558.5
45°	480.3	489.3	509.4	532.2	539.8
47.5°	451.3	461.6	487.2	511.5	519.8
50°	421.5	434.6	463.0	490.0	499.7
52.5°	390.3	407.0	439.5	467.9	476.9
55°	359.9	377.9	415.3	444.3	455.4
57.5°	328.7	348.1	390.3	423.6	429.8
60°	294.8	318.4	364.7	393.8	402.1
62.5°	261.6	288.6	338.4	366.1	373.0
65°	229.8	258.8	311.4	337.1	341.9
67.5°	195.2	229.8	281.7	305.2	306.6
70°	162.0	202.1	252.6	263.7	254.7
72.5°	129.4	172.3	218.7	209.7	202.1
75°	101.0	144.6	177.9	159.9	155.7
77.5°	74.7	118.3	127.3	117.7	110.0
80°	53.3	93.4	85.8	73.4	69.9
82.5°	36.7	58.8	47.1	36.7	31.8
85°	20.8	26.3	16.6	10.4	8.3
87.5°	9.0	6.2	3.5	2.8	2.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)